



Daria Mochly-Rosen

The George D. Smith Professor in Translational Medicine

Chemical and Systems Biology

 NIH Biosketch available Online

CONTACT INFORMATION

- **Alternate Contact**

Kathy Johnson - Executive Assistant

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Bio

ACADEMIC APPOINTMENTS

- Professor, Chemical and Systems Biology
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute
- Faculty Fellow, Stanford ChEM-H
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Founder and President, SPARK Global, (2015- present)
- Fellow, Stanford University Institute for Chemical Biology, (2013- present)
- Steering Committee Member, Cardiovascular Institute, (2013- present)
- Associate Director, Cardiovascular Institute, (2007-2011)
- SPARK Founder and co-Director, Stanford University, School of Medicine, (2006- present)
- Senior Associate Dean for Research, Stanford University School of Medicine, (2006-2013)
- Member, Cancer Institute at Stanford, (2005- present)
- Professor, by courtesy, Department of Neurosurgery, (2004-2009)
- Chair, Department of Molecular Pharmacology AKA Department of Chemical and Systems Biology, (2002-2006)
- Professor, Department of Chemical and Systems Biology, (2001- present)
- Chief, Division of Chemical Biology, (2001-2002)

HONORS AND AWARDS

- Reed-Hodgson Professor in Human Biology, Stanford University (1996-2001)

- TEDMED Talk in the session "Catalyzing Great Science", TEDMED (2015)
- The George D Smith Professor of Translational Medicine, School of medicine (2005)
- Janice Pfeffer Distinguished Lecture Award, International Society for Heart Research (ISHR) (2012)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Board Member, VIB Institutional Advisory Board, Belgium (2018 - present)
- Board Member, California Life Sciences Association (CLSA) (2016 - present)

PROFESSIONAL EDUCATION

- Ph.D., Weizmann Institute, Israel , Chemical Immunology (1983)
- B.S., Tel Aviv University, Israel , Life Sciences (1977)

COMMUNITY AND INTERNATIONAL WORK

- SPARK Global

LINKS

- Mochly-Rosen Lab: <http://www.stanford.edu/group/mochly-rosen/>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

We are a multi-disciplinary research lab that includes chemists, biochemists, biologists and physician scientists. We develop pharmacological agents and apply them to understand molecular and cellular events under basal and disease conditions using *in vitro*, *in culture* and *in vivo* models.

There are several research areas: two use peptide inhibitors and two to small molecules.

1. We study how protein-protein interactions govern cell signaling (Science, 1995). Using rational approaches, we identify short peptide inhibitors of intracellular protein-protein interactions to interfere with signal transduction under basal and pathological conditions (Nature Biotechnology, 2008). This rational approach led to the discovery of the only highly selective protein kinase C (PKC) inhibitors and activators. These peptide regulators of PKC identified the role of this family of enzymes in a number of cellular responses. Importantly, these peptide regulators are useful as therapeutics in a variety of animal models of human diseases, including myocardial infarction and heart failure (Nature Review Drug Discovery, 2013). A phase IIa study in humans demonstrated that one of the peptide inhibitors is efficacious in reducing cardiac damage in myocardial infarction patients. The study was carried out by KAI Pharmaceuticals that was co-founded with Dr. Leon Chen (a graduate student from the lab) in 2002. The company was acquired by Amgen in 2012 and one of KAI's drug was approved in Europe (2016). Current lab efforts focus on rationally generating substrate-specific inhibitors of the multi-substrate kinase, delta PKC (Qvit, J Am Chem Soc 2016; Qvit, Angewante 2016).

2. Recent effort focuses on rational design of inhibitors and activators of large GTPases that regulate mitochondrial dynamics (fusion and fission; Kornfeld, Circ Res 2015). One peptide inhibitor of pathological mitochondrial fission (Qi, JCS 2013; Guo, JCI 2013) is now being developed in Mitoconix (founded in 2016), as a treatment for Huntington's disease and other neurodegenerative diseases (Distanik, J Exp Med, 2016). Another peptide may provide a treatment for Charcot-Marie-Tooth II (Franco, Nature, 2016).

3. We unexpectedly identified aldehyde dehydrogenase 2 (ALDH2), the rate determining enzyme in ethanol metabolism, as a key regulator of cell survival under oxidative stress. We designed a novel assay to screen for activators of ALDH2, called Aldas (for ALDH activators) Science, 2008). Importantly, Aldas correct a structural mutation in ALDH2 found in ~0.5 billion East Asians and therefore represents a new class of drugs that serve as molecular chaperons (Nature Structure and Molecular Biology, 2010). Aldas also prevent nitroglycerin-induced tolerance and improves outcome after myocardial infarction (Science Translational Medicine,

2011). Very few selective activators of enzymes have been described. This research led to founding ALDEA Pharma with Dr. Che-Hong Chen, a senior scientist in the lab (2011); licensed to Foresee (2016). We also founded STAR, an international research organization for ALDH2 enzymopathy (Gross, *Ann Rev Tox*, 2015). Because defense from oxidative stress is determining cell survival, we examines the benefit of activating different ALDHs in a variety of diseases, including in Fanconi Anemia and radiation disease. Using a small molecule, we also 'hijacked' ALDH3A1 to metabolize the substrate of the mutated ALDH2 (Chen, *PNAS*, 2016).

4. Current efforts focus also on identifying small molecules that correct genetic defects in another critical enzyme for cell protection, glucose-6-phosphate dehydrogenase (G6PD). Mutations in G6PD lead to the second most common enzymopathy (~350 million people). Using high-throughput screening, in silico design and synthetic organic chemistry and X-ray crystallography, small molecule activators that increase the catalytic activity of the most common G6PD mutations are under development.

Teaching

COURSES

2018-19

- A Practical Approach to Drug Discover and Development: CSB 240B (Spr)
- A Practical Approach to Drug Discovery and Development: CSB 240A (Win)
- Drug Discovery and Development Seminar Series: CSB 242 (Aut, Win)

2017-18

- Drug Discovery and Development Seminar Series: CSB 242 (Aut, Win)

2016-17

- A Practical Approach to Drug Discover and Development: CSB 240B (Spr)
- A Practical Approach to Drug Discovery and Development: CSB 240A (Win)
- Drug Discovery and Development Seminar Series: CSB 242 (Aut, Win, Spr, Sum)

2015-16

- A Practical Approach to Drug Discover and Development: CSB 240B (Spr)
- Drug Discovery and Development Seminar Series: CSB 242 (Aut, Win, Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Edgar Campbell, Zachary Harvey, Paras Minhas

Postdoctoral Faculty Sponsor

Bruno Barros Queliconi, Amit Joshi, Amanda Lin, Riddhita Mukherjee, Matthew Stevens

Doctoral Dissertation Advisor (AC)

Luis Rios

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Cancer Biology (Phd Program)
- Cardiovascular Medicine (Fellowship Program)
- Chemical and Systems Biology (Phd Program)
- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **Drp1/Fis1 interaction mediates mitochondrial dysfunction in septic cardiomyopathy** *JOURNAL OF MOLECULAR AND CELLULAR CARDIOLOGY*
Haileselassie, B., Mukherjee, R., Joshi, A. U., Napier, B. A., Massis, L. M., Ostberg, N., Queliconi, B. B., Monack, D., Bernstein, D., Mochly-Rosen, D.
2019; 130: 160–69
- **A selective inhibitor of mitofusin 1-betaIIPKC association improves heart failure outcome in rats.** *Nature communications*
Ferreira, J. C., Campos, J. C., Qvit, N., Qi, X., Bozi, L. H., Bechara, L. R., Lima, V. M., Queliconi, B. B., Disatnik, M., Dourado, P. M., Kowaltowski, A. J., Mochly-Rosen, D.
2019; 10 (1): 329
- **Surviving in the Valley of Death: Opportunities and Challenges in Translating Academic Drug Discoveries** *ANNUAL REVIEW OF PHARMACOLOGY AND TOXICOLOGY, VOL 59*
Parrish, M. C., Tan, Y., Grimes, K. V., Mochly-Rosen, D., Insel, P. A.
2019; 59: 405–21
- **Macrophage de novo NAD(+) synthesis specifies immune function in aging and inflammation** *NATURE IMMUNOLOGY*
Minhas, P. S., Liu, L., Moon, P. K., Joshi, A. U., Dove, C., Mhatre, S., Contrepois, K., Wang, Q., Lee, B. A., Coronado, M., Bernstein, D., Snyder, M. P., Migaud, et al
2019; 20 (1): 50–+
- **Proteasome-Dependent Regulation of Distinct Metabolic States During Long-Term Culture of Human iPSC-Derived Cardiomyocytes.** *Circulation research*
Ebert, A., Joshi, A. U., Andorf, S., Dai, Y., Sampathkumar, S., Chen, H., Li, Y., Garg, P., Toischer, K., Hasenfu#G., Mochly Rosen, D., Wu, J. C.
2019
- **Targeting mitochondrial dysfunction and oxidative stress in heart failure: Challenges and opportunities** *FREE RADICAL BIOLOGY AND MEDICINE*
Kiyuna, L., Prestes e Albuquerque, R., Chen, C., Mochly-Rosen, D., Batista Ferreira, J.
2018; 129: 155–68
- **Mortal engines: Mitochondrial bioenergetics and dysfunction in neurodegenerative diseases**
Joshi, A. U., Mochly-Rosen, D.
ACADEMIC PRESS LTD- ELSEVIER SCIENCE LTD.2018: 2–15
- **ALDH1 Bio-activates Nifuroxazide to Eradicate ALDH(High) Melanoma-Initiating Cells** *CELL CHEMICAL BIOLOGY*
Sarvi, S., Crispin, R., Lu, Y., Zeng, L., Hurley, T. D., Houston, D. R., von Kriegsheim, A., Chen, C., Mochly-Rosen, D., Ranzani, M., Mathers, M. E., Xu, X., Xu, et al
2018; 25 (12): 1456–+
- **Macrophage de novo NAD+ synthesis specifies immune function in aging and inflammation.** *Nature immunology*
Minhas, P. S., Liu, L., Moon, P. K., Joshi, A. U., Dove, C., Mhatre, S., Contrepois, K., Wang, Q., Lee, B. A., Coronado, M., Bernstein, D., Snyder, M. P., Migaud, et al
2018
- **4-HNE-mediated post-translational modulation of DICER in heart failure**
Kiyuna, L., MacRae, I. J., Chen, C., Mochly-Rosen, D., Ferreira, J.
ELSEVIER SCIENCE INC.2018: S29
- **Correcting glucose-6-phosphate dehydrogenase deficiency with a small-molecule activator.** *Nature communications*
Hwang, S., Mruk, K., Rahighi, S., Raub, A. G., Chen, C., Dorn, L. E., Horikoshi, N., Wakatsuki, S., Chen, J. K., Mochly-Rosen, D.
2018; 9 (1): 4045
- **ALDH1 Bio-activates Nifuroxazide to Eradicate ALDH(High) Melanoma-Initiating Cells.** *Cell chemical biology*
Sarvi, S., Crispin, R., Lu, Y., Zeng, L., Hurley, T. D., Houston, D. R., von Kriegsheim, A., Chen, C., Mochly-Rosen, D., Ranzani, M., Mathers, M. E., Xu, X., Xu, et al
2018
- **Interaction of mitochondrial fission factor with dynamin related protein 1 governs physiological mitochondrial function in vivo.** *Scientific reports*
Kornfeld, O. S., Qvit, N., Haileselassie, B., Shamloo, M., Bernardi, P., Mochly-Rosen, D.

2018; 8 (1): 14034

- **Surviving in the Valley of Death: Opportunities and Challenges in Translating Academic Drug Discoveries.** *Annual review of pharmacology and toxicology*
Parrish, M. C., Tan, Y. J., Grimes, K. V., Mochly-Rosen, D.
2018
- **Monoamine oxidase-dependent endoplasmic reticulum-mitochondria dysfunction and mast cell degranulation lead to adverse cardiac remodeling in diabetes** *CELL DEATH AND DIFFERENTIATION*
Deshwal, S., Forkink, M., Hu, C., Buonincontri, G., Antonucci, S., Di Sante, M., Murphy, M. P., Paolucci, N., Mochly-Rosen, D., Krieg, T., Di Lisa, F., Kaludercic, N.
2018; 25 (9): 1518–32
- **Mortal engines: Mitochondrial bioenergetics and dysfunction in neurodegenerative diseases.** *Pharmacological research*
Joshi, A. U., Mochly-Rosen, D.
2018
- **Aldehyde dehydrogenase 3A1 activation prevents radiation-induced xerostomia by protecting salivary stem cells from toxic aldehydes** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Saiki, J. P., Cao, H., Van Wassenhove, L. D., Viswanathan, V., Bloomstein, J., Nambiar, D. K., Mattingly, A. J., Jiang, D., Chen, C., Stevens, M. C., Simmons, A. L., Park, H., von Eyben, et al
2018; 115 (24): 6279–84
- **Cardioprotection induced by a brief exposure to acetaldehyde: role of aldehyde dehydrogenase 2** *CARDIOVASCULAR RESEARCH*
Ueta, C., Campos, J., Prestes e Albuquerque, R., Lima, V., Disatnik, M., Sanchez, A., Chen, C., Gennari de Medeiros, M., Yang, W., Mochly-Rosen, D., Batista Ferreira, J.
2018; 114 (7): 1006–15
- **MFN2 agonists reverse mitochondrial defects in preclinical models of Charcot-Marie-Tooth disease type 2A** *SCIENCE*
Rocha, A. G., Franco, A., Krezel, A. M., Rumsey, J. M., Alberti, J. M., Knight, W. C., Biris, N., Zacharioudakis, E., Janetka, J. W., Baloh, R. H., Kitsis, R. N., Mochly-Rosen, D., Townsend, et al
2018; 360 (6386): 336–41
- **Transcriptome analysis and prognosis of ALDH isoforms in human cancer** *SCIENTIFIC REPORTS*
Chang, P., Chen, C., Yeh, C., Lu, H., Liu, T., Chen, M., Liu, C., Wu, A. H., Yang, M., Tai, S., Mochly-Rosen, D., Huang, C. F.
2018; 8: 2713
- **Drp1/Fis1 interaction mediates mitochondrial dysfunction, bioenergetic failure and cognitive decline in Alzheimer's disease.** *Oncotarget*
Joshi, A. U., Saw, N. L., Shamloo, M., Mochly-Rosen, D.
2018; 9 (5): 6128–43
- **EVALUATION OF THE TEMPORAL CHANGES IN CARDIAC BIOENERGETICS IN THE SETTING OF SEPSIS**
Hailelessie, B., Joshi, A., Bernstein, D., Mochly-Rosen, D.
LIPPINCOTT WILLIAMS & WILKINS.2018: 742
- **Inhibition of Drp1/Fis1 interaction slows progression of amyotrophic lateral sclerosis.** *EMBO molecular medicine*
Joshi, A. U., Saw, N. L., Vogel, H., Cunningham, A. D., Shamloo, M., Mochly-Rosen, D.
2018
- **Genetic Polymorphisms of Alcohol Metabolizing Enzymes and Alcohol Consumption are Associated With Asymptomatic Cardiac Remodeling and Subclinical Systolic Dysfunction in Large Community-Dwelling Asians** *ALCOHOL AND ALCOHOLISM*
Hung, C., Chang, S., Chang, S., Chi, P., Lai, Y., Wang, S., Wu, Y., Yeh, H., Lin, S., Chen, C., Mochly-Rosen, D., Wang, L., MAGNET Study Investigator
2017; 52 (6): 638–46
- **Thiophene bridged aldehydes (TBAs) image ALDH activity in cells via modulation of intramolecular charge transfer** *CHEMICAL SCIENCE*
Maity, S., Sadlowski, C. M., Lin, J., Chen, C., Peng, L., Lee, E., Vegesna, G. K., Lee, C., Kim, S., Mochly-Rosen, D., Kumar, S., Murthy, N.
2017; 8 (10): 7143–51
- **Structural analysis of clinically relevant pathogenic G6PD variants reveals the importance of tetramerization for G6PD activity.** *Matters*
Cunningham, A. D., Mochly-Rosen, D.
2017; 2017

- **Aldehyde dehydrogenase 2*2 knock-in mice show increased reactive oxygen species production in response to cisplatin treatment.** *Journal of biomedical science*
Kim, J., Chen, C., Yang, J., Mochly-Rosen, D.
2017; 24 (1): 33-?
- **Targeting aldehyde dehydrogenase activity in head and neck squamous cell carcinoma with a novel small molecule inhibitor.** *Oncotarget*
Kim, J., Ho Shin, J., Chen, C., Cruz, L., Farnebo, L., Yang, J., Borges, P., Kang, G., Mochly-Rosen, D., Sunwoo, J. B.
2017
- **Coupling between Protein Stability and Catalytic Activity Determines Pathogenicity of G6PD Variants** *CELL REPORTS*
Cunningham, A. D., Colavin, A., Huang, K. C., Mochly-Rosen, D.
2017; 18 (11): 2592-2599
- **Peptidomimetic therapeutics: scientific approaches and opportunities.** *Drug discovery today*
Qvit, N., Rubin, S. J., Urban, T. J., Mochly-Rosen, D., Gross, E. R.
2017; 22 (2): 454-462
- **Aldehyde dehydrogenase 2 activation and coevolution of its epsilon PKC-mediated phosphorylation sites** *JOURNAL OF BIOMEDICAL SCIENCE*
Nene, A., Chen, C., Disatnik, M., Cruz, L., Mochly-Rosen, D.
2017; 24
- **Peptides and peptidomimetics as regulators of protein-protein interactions.** *Current opinion in structural biology*
Cunningham, A. D., Qvit, N., Mochly-Rosen, D.
2017; 44: 59-66
- **Disruption of mitochondrial quality control in peripheral artery disease: New therapeutic opportunities** *PHARMACOLOGICAL RESEARCH*
Ueta, C. B., Gomes, K. S., Ribeiro, M. A., Mochly-Rosen, D., Ferreira, J. C.
2017; 115: 96-106
- **Targeting aldehyde dehydrogenase activity in head and neck squamous cell carcinoma with a novel small molecule inhibitor.** *Oncotarget*
Kim, J., Shin, J. H., Chen, C. H., Cruz, L., Farnebo, L., Yang, J., Borges, P., Kang, G., Mochly-Rosen, D., Sunwoo, J. B.
2017; 8 (32): 52345-56
- **Exercise reestablishes autophagic flux and mitochondrial quality control in heart failure** *AUTOPHAGY*
Campos, J. C., Queliconi, B. B., Bozi, L. M., Bechara, L. G., Dourado, P. M., Andres, A. M., Jannig, P. R., Gomes, K. S., Zambelli, V. O., Rocha-Resende, C., Guatimosim, S., Brum, P. C., Mochly-Rosen, et al
2017; 13 (8): 1304-17
- **Human Chitotriosidase Does Not Catabolize Hyaluronan.** *International journal of biological macromolecules*
Danielson, B., Chen, C. H., Kaber, G., Mochly-Rosen, D., Grimes, K., Stern, R., Bollyky, P. L.
2017
- **The Role of Mitochondrial Aldehyde Dehydrogenase 2 (ALDH2) in Neuropathology and Neurodegeneration.** *Acta neurologica Taiwanica*
Chen, C., Joshi, A. U., Mochly-Rosen, D.
2016; 25(4): 111-123
- **Genetic variations of aldehyde dehydrogenase 2 and alcohol dehydrogenase 1B are associated with the etiology of atrial fibrillation in Japanese** *JOURNAL OF BIOMEDICAL SCIENCE*
Nakano, Y., Ochi, H., Onohara, Y., Sairaku, A., Tokuyama, T., Matsumura, H., Tomomori, S., Amioka, M., Hironomobe, N., Motoda, C., Oda, N., Chayama, K., Chen, et al
2016; 23
- **Engineered Substrate-Specific Delta PKC Antagonists to Enhance Cardiac Therapeutics** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
Qvit, N., Kornfeld, O. S., Mochly-Rosen, D.
2016; 55 (50): 15672-15679
- **Potential biomarkers to follow the progression and treatment response of Huntington's disease.** *journal of experimental medicine*
Disatnik, M., Joshi, A. U., Saw, N. L., Shamloo, M., Leavitt, B. R., Qi, X., Mochly-Rosen, D.
2016

- **Correcting mitochondrial fusion by manipulating mitofusin conformations.** *Nature*
Franco, A., Kitsis, R. N., Fleischer, J. A., Gavathiotis, E., Kornfeld, O. S., Gong, G., Biris, N., Benz, A., Qvit, N., Donnelly, S. K., Chen, Y., Mennerick, S., Hodgson, et al
2016
- **In Vivo Post-Cardiac Arrest Myocardial Dysfunction Is Supported by Ca²⁺/Calmodulin-Dependent Protein Kinase II-Mediated Calcium Long-Term Potentiation and Mitigated by Alda-1, an Agonist of Aldehyde Dehydrogenase Type 2.** *Circulation*
Woods, C. E., Shang, C., Taghavi, F., Downey, P., Zalewski, A., Rubio, G. R., Liu, J., Homburger, J. R., Grunwald, Z., Qi, W., Bollensdorff, C., Thanaporn, P., Ali, et al
2016; 134 (13): 961-977
- **Transient Receptor Potential Vanilloid 1 Regulates Mitochondrial Membrane Potential and Myocardial Reperfusion Injury.** *Journal of the American Heart Association*
Hurt, C. M., Lu, Y., M Stary, C., Piplani, H., Small, B. A., Urban, T. J., Qvit, N., Gross, G. J., Mochly-Rosen, D., Gross, E. R.
2016; 5 (9)
- **The entangled ER-mitochondrial axis as a potential therapeutic strategy in neurodegeneration: A tangled duo unchained.** *Cell calcium*
Joshi, A. U., Kornfeld, O. S., Mochly-Rosen, D.
2016; 60 (3): 218-234
- **Transient Receptor Potential Vanilloid 1 Regulates Mitochondrial Membrane Potential and Myocardial Reperfusion Injury** *JOURNAL OF THE AMERICAN HEART ASSOCIATION*
Hurt, C. M., Lu, Y., Stary, C. M., Piplani, H., Small, B. A., Urban, T. J., Qvit, N., Gross, G. J., Mochly-Rosen, D., Gross, E. R.
2016; 5 (9)
- **Aldehyde dehydrogenase 2 in aplastic anemia, Fanconi anemia and hematopoietic stem cells** *MOLECULAR GENETICS AND METABOLISM*
Van Wassenhove, L. D., Mochly-Rosen, D., Weinberg, K. I.
2016; 119 (1-2): 28-36
- **PKC-ALDH2 Pathway Plays a Novel Role in Adipocyte Differentiation** *PLOS ONE*
Yu, Y., Liao, P., Guo, C., Chen, C., Mochly-Rosen, D., Chuang, L.
2016; 11 (8)
- **Glyceraldehyde-3-Phosphate Dehydrogenase (GAPDH) Protein-Protein Interaction Inhibitor Reveals a Non-catalytic Role for GAPDH Oligomerization in Cell Death** *JOURNAL OF BIOLOGICAL CHEMISTRY*
Qvit, N., Joshi, A. U., Cunningham, A. D., Ferreira, J. C., Mochly-Rosen, D.
2016; 291 (26): 13608-13621
- **Selective Phosphorylation Inhibitor of Delta Protein Kinase C-Pyruvate Dehydrogenase Kinase Protein-Protein Interactions: Application for Myocardial Injury in Vivo** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Qvit, N., Disatnik, M., Sho, E., Mochly-Rosen, D.
2016; 138 (24): 7626-7635
- **Glucose-6-Phosphate Dehydrogenase Deficiency and the Need for a Novel Treatment to Prevent Kernicterus** *CLINICS IN PERINATOLOGY*
Cunningham, A. D., Hwang, S., Mochly-Rosen, D.
2016; 43 (2): 341-?
- **Scaffold proteins LACK and TRACK as potential drug targets in kinetoplastid parasites: Development of inhibitors** *INTERNATIONAL JOURNAL FOR PARASITOLOGY-DRUGS AND DRUG RESISTANCE*
Qvit, N., Schechtman, D., Pena, D. A., Berti, D. A., Soares, C. O., Miao, Q., Liang, L. (., Baron, L. A., Teh-Poot, C., Martinez-Vega, P., Ramirez-Sierra, M. J., Churchill, E., Cunningham, et al
2016; 6 (1): 74-84
- **Coevolution and Disease-Causing Mutations in Glucose-6-Phosphate Dehydrogenase (G6PD)**
Cunningham, A., Colavin, A., Huang, K. C., Mochly-Rosen, D.
FEDERATION AMER SOC EXP BIOL.2016
- **Coevolution and Disease-Causing Mutations in Glucose-6-Phosphate Dehydrogenase (G6PD)**
Cunningham, A., Colavin, A., Huang, K. C., Mochly-Rosen, D.
FEDERATION AMER SOC EXP BIOL.2016

- **Scaffold proteins LACK and TRACK as potential drug targets in kinetoplastid parasites: Development of inhibitors.** *International journal for parasitology. Drugs and drug resistance*
Qvit, N., Schechtman, D., Pena, D. A., Berti, D. A., Soares, C. O., Miao, Q., Liang, L. A., Baron, L. A., Teh-Poot, C., Martínez-Vega, P., Ramirez-Sierra, M. J., Churchill, E., Cunningham, et al
2016; 6 (1): 74-84
- **VCP recruitment to mitochondria causes mitophagy impairment and neurodegeneration in models of Huntington's disease.** *Nature communications*
Guo, X., Sun, X., Hu, D., Wang, Y., Fujioka, H., Vyas, R., Chakrapani, S., Joshi, A. U., Luo, Y., Mochly-Rosen, D., Qi, X.
2016; 7: 12646-?
- **Impaired GAPDH-induced mitophagy contributes to the pathology of Huntington's disease** *EMBO MOLECULAR MEDICINE*
Hwang, S., Disatnik, M., Mochly-Rosen, D.
2015; 7 (10): 1307-1326
- **Diabetes-induced Mitochondrial Dna Damage and Cardiac Dysfunction are Aggravated Due to Low Aldehyde Dehydrogenase 2 (aldh2) Activity in Aldh 2*2 (e487k) Knock-in Mutant Mice**
Palaniyandi, S. S., Pan, G., Deshpande, M., Mali, V. R., Xu, J., Yang, X., Giri, S., Chen, C., Mochly-Rosen, D.
LIPPINCOTT WILLIAMS & WILKINS.2015
- **High-throughput Single Cell Tracking of Mitochondrial Function in Cardiomyocytes**
Fajardo, G., Bezold, K., Meyer, T., Mochly-Rosen, D., Bernstein, D.
LIPPINCOTT WILLIAMS & WILKINS.2015
- **Mitochondrial reactive oxygen species at the heart of the matter: new therapeutic approaches for cardiovascular diseases.** *Circulation research*
Kornfeld, O. S., Hwang, S., Disatnik, M., Chen, C., Qvit, N., Mochly-Rosen, D.
2015; 116 (11): 1783-1799
- **Elucidation of the role of glyceraldehyde-3-phosphate dehydrogenase (GAPDH) interaction with mutant huntingtin (mtHtt) for mitochondrial elimination in Huntington's disease**
Hwang, S., Disatnik, M., Mochly-Rosen, D.
FEDERATION AMER SOC EXP BIOL.2015
- **Pharmacological recruitment of aldehyde dehydrogenase 3A1 (ALDH3A1) to assist ALDH2 in acetaldehyde and ethanol metabolism in vivo** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Chen, C., Cruz, L. A., Mochly-Rosen, D.
2015; 112 (10): 3074-3079
- **New therapeutics to modulate mitochondrial dynamics and mitophagy in cardiac diseases.** *Journal of molecular medicine (Berlin, Germany)*
Disatnik, M., Hwang, S., Ferreira, J. C., Mochly-Rosen, D.
2015; 93 (3): 279-287
- **Aldehydic load and aldehyde dehydrogenase 2 profile during the progression of post-myocardial infarction cardiomyopathy: Benefits of Alda-1** *INTERNATIONAL JOURNAL OF CARDIOLOGY*
Gomes, K. M., Bechara, L. R., Lima, V. M., Ribeiro, M. A., Campos, J. C., Dourado, P. M., Kowaltowski, A. J., Mochly-Rosen, D., Ferreira, J. C.
2015; 179: 129-138
- **A personalized medicine approach for asian americans with the aldehyde dehydrogenase 2*2 variant.** *Annual review of pharmacology and toxicology*
Gross, E. R., Zambelli, V. O., Small, B. A., Ferreira, J. C., Chen, C., Mochly-Rosen, D.
2015; 55: 107-127
- **Neuroprotective effects of aldehyde dehydrogenase 2 activation in rotenone-induced cellular and animal models of parkinsonism** *EXPERIMENTAL NEUROLOGY*
Chiu, C., Yeh, T., Lai, S., Wu-Chou, Y., Chen, C., Mochly-Rosen, D., Huang, Y., Chen, Y., Chen, C., Chang, Y., Wang, H., Lu, C.
2015; 263: 244-253
- **The many hats of protein kinase C delta: one enzyme with many functions** *BIOCHEMICAL SOCIETY TRANSACTIONS*
Qvit, N., Mochly-Rosen, D.
2014; 42: 1529-1533
- **The many hats of protein kinase Cd: one enzyme with many functions.** *Biochemical Society transactions*
Qvit, N., Mochly-Rosen, D.

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